

THREE ELEMENT COAXIAL VASO-OCCLUSIVE DEVICE

ABSTRACT OF THE DISCLOSURE

A vaso-occlusive device includes inner, intermediate, and outer elements
5 arranged coaxially. The inner element is a filamentous element, preferably a
microcoil. The intermediate element is made of a non-metallic material, preferably
an expansile polymer. The outer element is substantially non-expansile and defines
at least one gap or opening through which the intermediate element is exposed. In a
preferred embodiment, when the intermediate element is expanded, it protrudes
10 through the at least one gap or opening in the outer element and assumes a
configuration with an undulating, convexly-curved outer surface defining a chain of
arcuate segments, each having a diameter significantly greater than the diameter of
the outer element. The expanded configuration of the intermediate element
minimizes friction when the device is deployed through a microcatheter, thereby
15 reducing the likelihood of buckling while maintaining excellent flexibility. The result
is a device with enhanced pushability and trackability when deployed through a
microcatheter.